

REMARKS

These amendments and remarks are being filed in response to the final Office Action dated December 9, 2004. For the following reasons this amendment should be entered, the application allowed, and the case passed to issue.

No new matter or new considerations are introduced by this amendment. The amendments to claims 1 and 21 are supported by claims 4, 6, 20, and 22, and by the specification at page 5, lines 5-10.

Claims 1-3, 10, 21, 23, and 25 are pending in this application. Claims 4-9, 11-20, 22, and 24 have been canceled in this amendment. Claims 1 and 21 have been amended in this response.

Claim Rejections Under 35 U.S.C. § 112

Claims 20 and 22 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description. The Examiner alleged that specification does not adequately disclose that there is an adhesive layer between the first part and the second part where the adhesive layer is formed from the paint.

Claim 20 and 22 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite because it is allegedly not clear if Applicants are reciting that the paint is adhesive.

These rejections are traversed, and reconsideration and withdrawal thereof is respectfully requested.

Initially, this rejection is moot as claims 20 and 22 have been canceled. Because limitations from claims 20 and 22 have been added to independent claims 1 and 21, Applicants assert that claims 1 and 21 are definite and comply with the written specification.

According to claims 1 and 21, the adhesive layer is formed from the coating while the first part and the second part are insert-molded, and the coating is made of or includes polyethylene. Therefore, the adhesive layer is formed from polyethylene, which is a resin. As defined, adhesives include resins (*See* attached MCGRAW - HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS, 5th Ed. p. 35 (1994)). As is well known in the art, resins, such as polyethylene, are inherently capable of forming an adhesive layer.

Contrary to the Examiner's assertions, the written description fully supports the claims. The specification discloses: "A firmly adhesive layer is formed between the powder coating and the foot portion 4a by the heat treatment. Because the powder coating and the tank body melt together while the adhesive layer remains, bonding strength between the foot portion and the tank body is stronger than that obtained when the foot portion 4a is directly insert-molded in the tank body" (page 5, lines 5-10). In view of this disclosure, a person of ordinary skill in this art would recognize that an adhesive layer is formed between the first part and the second part, and the adhesive layer is formed from the coating.

The instant specification, along with the well-known definition of "adhesive" sufficiently defines and describes the claimed adhesive layer. A person of ordinary skill in this art would recognize that the claimed adhesive layer is fully enabled by the instant written description. Thus, Applicants submit that the instant claims fully comport with the requirements of 35 U.S.C. § 112.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-4 and 10 were rejected under 35 U.S.C. 102(b) as being anticipated by Kasugai et al. (U.S. Patent No. 5,104,472).

Claims 1-4 and 10 were rejected under 35 U.S.C. 102(b) as being anticipated by Prince (U.S. Patent No. 6,189,744).

Claims 1-4 were rejected under 35 U.S.C. 102(e) as being anticipated by Pachciarz et al. (U.S. Patent No. 6,435,365).

Claims 1-4 and 10 were rejected under 35 U.S.C. 102(b) as being anticipated by Atsuo et al. (JP 06-234163).

These rejections are traversed, and reconsideration and withdrawal thereof respectfully requested. The following is a comparison between the instant invention as claimed, and the cited prior art.

An aspect of the present invention, per claim 1, is an insert mold structure comprising a first part made of polyethylene and a second part made of a material selected from the group of metals and resins having a lower permeation characteristic for gasoline than polyethylene coated with a coating made of polyethylene. The second part is insert-molded in the first part. An adhesive layer is between the first part and the second part. The adhesive layer is formed from the coating while the second part is insert molded in the first part.

Another aspect of the invention, per claim 21, is an insert mold structure comprising a first part consisting essentially of polyethylene and a second part consisting essentially of a material selected from the group of metals and resins having a lower permeation characteristic for gasoline than polyethylene coated with a coating. The coating includes polyethylene. The first part and the second part are insert-molded. An adhesive layer is between the first part and the second part. The adhesive layer is formed from the coating while the first part and the second part are insert-molded.

The material combination of the first part, the second part, and the coating provides low permeability with respect to gasoline and good adhesion among these members.

The Examiner asserted that Kasugai et al., Prince, Pachciarz et al., and Atsuo et al. disclose the claimed structure. Kasugai et al., Prince, Pachciarz et al., and Atsuo et al., however, do not disclose the claimed insert mold structure. Kasugai et al. fail to disclose a first part made of polyethylene and a second part of a material selected from the group of metals and resins having a lower permeation characteristic for gasoline than polyethylene. According to Kasugai et al. (col. 3, lines 50-54), a central tube 21 is made of metal and a base portion 23 is made of a resin, or alternatively, a nipple 20 can be made entirely of a resin. Kasugai et al. does not disclose what kind of resin. At least the claimed first part made of polyethylene is not disclosed by Kasugai et al., as required by claims 1 and 21. Furthermore, Kasugai et al. do not disclose the coating and an adhesive layer, as required by claims 1 and 21.

Prince does not disclose a first part of polyethylene and a second part of a material selected from the group of metals and resins having a lower permeation characteristic for gasoline than polyethylene, as required by claims 1 and 21. According to Prince (col. 2, lines 63-65), a cone 1 is formed of steel laminated with polypropylene, not polyethylene. Further, Prince does not disclose a coating of polyethylene, as required by claims 1 and 21.

Pachciarz et al. do not disclose a first part made of polyethylene and a second part of a material selected from the group of metals and resins having a lower permeation characteristic for gasoline than polyethylene, as required by claims 1 and 21. According to Pachciarz et al., the fuel tank 12 is made of a plastic material (col. 2, lines 52-53), and the support ring 36 is made of

plastic (col. 3, line 25). Furthermore, Pachciarz et al. do not disclose the coating and adhesive layer, as required by claims 1 and 21.

Atsuo et al. do not disclose a first part made of polyethylene and a second part of a material selected from the group of metals and resins having a lower permeation characteristic for gasoline than polyethylene coated with a coating of polyethylene, as required by claims 1 and 21. According to Atsuo et al., the collar 6 is made of nylon (para. [0017]) and the base member 1 is made of steel coated with a powder coating of nylon (para. [0015]).

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the disclosure in a single reference of each element of a claimed invention. *Helifix Ltd. v. Blok-Lok Ltd.*, 208 F.3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994); *Hoover Group, Inc. v. Custom Metalcraft, Inc.*, 66 F.3d 399, 36 USPQ2d 1101 (Fed. Cir. 1995); *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). Because Kasugai et al., Pachciarz et al., Prince, and Atsuo et al. do not disclose a first part made of polyethylene and a second part of a material selected from the group of metals and resins having a lower permeation characteristic for gasoline than polyethylene, as required by claims 1 and 21, Kasugai et al., Pachciarz et al., Prince, and Atsuo et al. do not anticipate claims 1 and 21. In addition, because Kasugai et al., Pachciarz et al., Prince, and Atsuo et al. do not disclose the coating of polyethylene and adhesive layer, as required by claims 1 and 21, Kasugai et al., Pachciarz et al., Prince, and Atsuo et al. further do not anticipate claims 1 and 21.

Applicants further submit that Kasugai et al., Pachciarz et al., Prince, and Atsuo et al. do not suggest the claimed insert mold structure.

The dependent claims are allowable for at least the same reasons as the independent claims from which they depend, and further distinguish the claimed invention, for example claims 3 and 23 further require that the coating and second part are heat-treated. Claims 10 and 25 further require that the melting point of the coating is lower than the melting point of the second part. The prior art does not suggest the claimed insert mold structure with these additional limitations.

In view of the above remarks, Applicants submit that this amendment should be entered, the application allowed, and the case passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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In addition, material has been drawn from the following references: R. E. Huschke, *Glossary of Meteorology*, American Meteorological Society, 1959; *U.S. Air Force Glossary of Standardized Terms*, AF Manual 11-1, vol. 1, 1972; *Communications-Electronics Terminology*, AF Manual 11-1, vol. 3, 1970; W. H. Allen, ed., *Dictionary of Technical Terms for Aerospace Use*, 1st ed., National Aeronautics and Space Administration, 1965; J. M. Gilliland, *Solar-Terrestrial Physics: A Glossary of Terms and Abbreviations*, Royal Aircraft Establishment Technical Report 67158, 1967; *Glossary of Air Traffic Control Terms*, Federal Aviation Agency; *A Glossary of Range Terminology*, White Sands Missile Range, New Mexico, National Bureau of Standards, AD 467-424; *A DOD Glossary of Mapping, Charting and Geodetic Terms*, 1st ed., Department of Defense, 1967; P. W. Thrush, comp. and ed., *A Dictionary of Mining, Mineral, and Related Terms*, Bureau of Mines, 1968; *Nuclear Terms: A Glossary*, 2d ed., Atomic Energy Commission; F. Casey, ed., *Compilation of Terms in Information Sciences Technology*, Federal Council for Science and Technology, 1970; *Glossary of Stinfo Terminology*, Office of Aerospace Research, U.S. Air Force, 1963; *Naval Dictionary of Electronic, Technical, and Imperative Terms*, Bureau of Naval Personnel, 1962; *ADP Glossary*, Department of the Navy, NAVSO P-3097.

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adenoma

tissue of the nasopharynx. Also known as pharyngeal tonsil. { 'ad,noid }

adenoma [MED] A benign tumor of glandular origin and structure. { 'ad-ən'ō-mə }

adenomatoid tumor [MED] A benign genital-tract tumor composed of stroma whose spaces are lined by cells that resemble epithelium, endothelium, and mesothelium. { 'ad-ən'ā-mə,toid 'tū-mər }

adenomatosis [MED] A condition characterized by multiple adenomas within an organ or in several related organs. { 'ad-ən,ō-mə'tō-səs }

adenomatous goiter [MED] An asymmetric goiter due to isolated nodular masses of thyroid tissue. Also known as multiple colloid goiter, nodular goiter. { 'ad-ən,ō-matəs 'gōit-ər }

adenomere [EMBRYO] The embryonic structure which will become the functional portion of a gland. { 'ad-ən'ō-mir }

adenomyoma [MED] A benign tumor of glandular and muscular elements occurring principally in the uterus and rectum. { 'ad-ən,ō,mī'ō-mə }

adenomyosis [MED] 1. The invasion of muscular tissue, such as of the uterine wall or Fallopian tubes, by endometrial tissue. 2. Any abnormal growth of muscle or glandular tissues. { 'ad-ən,ō,mī'ō-səs }

adenopathy [MED] Any glandular disease; common usage limits the term to any abnormal swelling or enlargement of lymph nodes. { 'ad-ən'ā-pə-thē }

Adenophorea [INV ZOO] A class of unsegmented worms in the phylum Nematoda. { 'ad-ən'ə'fōr-ē-ə }

adenophyllous [BOT] Having leaves with glands. { 'ad-ən'ā-fē-ləs }

adenosine [BIOCHEM] $C_{10}H_{13}N_5O_4$ A nucleoside composed of adenine and D-ribose. { 'ə'den-ə,sēn }

adenosine 3',5'-cyclic monophosphate See cyclic adenylic acid. { 'ə'den-ə,sēn 'thrē'prīm 'fiv'prīm 'sīk-lik 'mā-nō'fās-fāt }

adenosine 3',5'-cyclic phosphate See cyclic adenylic acid. { 'ə'den-ə,sēn 'thrē'prīm 'fiv'prīm 'sīk-lik 'fās-fāt }

adenosinediphosphatase [BIOCHEM] An enzyme that catalyzes the hydrolysis of adenosinediphosphate. Abbreviated ADPase. { 'ə'den-ə,sēn,dī'fās-fē,tās }

adenosinediphosphate [BIOCHEM] $C_{10}H_{15}N_5O_{10}P_2$ A coenzyme composed of adenosine and two molecules of phosphoric acid that is important in intermediate cellular metabolism. Abbreviated ADP. { 'ə'den-ə,sēn,dī'fās-fāt }

adenosinemonophosphate See adenylic acid. { 'ə'den-ə,sēn'mā-nō'fās-fāt }

adenosine 3',5'-monophosphate See cyclic adenylic acid. { 'ə'den-ə,sēn 'thrē'prīm 'fiv'prīm 'mā-nō'fās-fāt }

adenosinetriphosphatase [BIOCHEM] An enzyme that catalyzes the hydrolysis of adenosinetriphosphate. Abbreviated ATPase. { 'ə'den-ə,sēn,tri'fās-fē,tās }

adenosinetriphosphate [BIOCHEM] $C_{10}H_{16}N_5O_{12}P_3$ A coenzyme composed of adenosinediphosphate with an additional phosphate group; an important energy compound in metabolism. Abbreviated ATP. { 'ə'den-ə,sēn,tri'fās-fāt }

adenosis [MED] Any nonneoplastic glandular disease, especially one involving the lymph nodes. { 'ad-ən'ō-səs }

adeno-SV40 hybrid virus [VIROL] A defective virus particle in which part of the genetic material of papovavirus SV40 is encased in an adenovirus protein coat. { 'ad-ən,ō'es,vē'fōrtē 'hī-brəd 'vī-rəs }

Adenoviridae [VIROL] A family of double-stranded DNA viruses with icosahedral symmetry; usually found in the respiratory tract of the host species and often associated with respiratory diseases. Also known as adenovirus. { 'ad-ən'ō'vīr-ə,dē }

adenovirus See Adenoviridae. { 'ad-ən,ō'vī-rəs }

adenylcyclase [BIOCHEM] The catalyzing enzyme in the conversion of adenosinetriphosphate to cyclic adenosinemonophosphate during metabolism. { 'ad-ən,il'sī,klē-s }

adenylic acid [BIOCHEM] 1. A generic term for a group of isomeric nucleotides. 2. The phosphoric acid ester of adenosine. Also known as adenosinemonophosphate (AMP). { 'ad-ən,il'ik 'as-əd }

adeoniform [INV ZOO] 1. A lobate, bilamellar zoarium. 2. Resembling the fossil bryozoan *Adeona*. { 'ad-ē'ā-nō,fōrm }

Adephaga [INV ZOO] A suborder of insects in the order Coleoptera characterized by fused hind coxae that are immovable. { 'əd'ef-ə-gə }

adequacy [ELEC] The existence of sufficient facilities within

an electric power system to satisfy the customer load requirement under static system conditions. { 'ad-ə'kwə-sē }

adequate contact [MED] The degree of contact required between an infectious and a susceptible individual to cause infection of the latter. { 'ad-ə'kwət 'kän,takt }

adequate stimulus [PHYSIO] The energy of any specific mode that is sufficient to elicit a response in an excitable tissue. { 'ad-ə'kwət 'stim-yə-ləs }

ader wax See ozocerite. { 'ad-ər,waks }

ADF See automatic direction finder.

ADF bearing indicator [NAV] An instrument used with an airborne radio direction finder to indicate automatically the relative, magnetic, or true bearing (or reciprocal) of a transmitter. { 'ā'dē'ef 'ber-ij,in-də,kāt-ər }

adfreezing [HYD] The process by which one object adheres to another by the binding action of ice; applied to permafrost studies. { 'ad'frēz-ij }

ADF reversal [NAV] The swinging of the needle on the direction indicator of an airborne automatic direction finder (ADF) through 180°, indicating that the station to which the direction finder is tuned has been passed. { 'ā'dē'ef ri'vərsəl }

ADH See vasopressin.

Adhara [ASTRON] A star of spectral type B2II. Also known as ϵ Canis Majoris. { 'əd-dār-ə }

adherend [MATER] 1. A body attached to another by means of an adhesive substance. 2. The surface to which an adhesive adheres. { 'ad'hīr-ənd }

adhering junction [CYTOL] An intercellular junction that promotes adhesion between cells. Also known as desmosome. { 'ad'hīr-ij 'jəŋk-shən }

adhesion [BOT] Growing together of members of different and distinct whorls. [ELECTROMAG] Any mutually attractive force holding together two magnetic bodies, or two oppositely charged nonconducting bodies. [ENG] Intimate sticking together of metal surfaces under compressive stresses by formation of metallic bonds. [MECH] The force of static friction between two bodies, or the effects of this force. [MED] The abnormal union of an organ or part with some other part by formation of fibrous tissue. [PHYS] The tendency, due to intermolecular forces, for matter to cling to other matter. { 'ad'hē-zhən }

adhesional work [THERMO] The work required to separate a unit area of a surface at which two substances are in contact. Also known as work of adhesion. { 'ad'hē-zhən-əl,wərk }

adhesive [MATER] A substance used to bond two or more solids so that they act or can be used as a single piece; examples are resins, formaldehydes, glue, paste, cement, putty, and polyvinyl resin emulsions. { 'ad'hēz-iv }

adhesive bond [MECH] The forces such as dipole bonds which attract adhesives and base materials to each other. { 'ad'hēz-iv 'bānd }

adhesive bonding [ENG] The fastening together of two or more solids by the use of glue, cement, or other adhesive. { 'ad'hēz-iv 'bānd-ij }

adhesive cell [INV ZOO] Any of various glandular cells in ctenophores, turbellarians, and hydras used for adhesion to a substrate and for capture of prey. Also known as colloblast; glue cell; lasso cell. { 'ad'hēz-iv 'sel }

adhesive strength [ENG] The strength of an adhesive bond, usually measured as a force required to separate two objects of standard bonded area, by either shear or tensile stress. { 'ad'hēz-iv 'streŋkth }

adhesive tape [MATER] Tape coated with a substance that binds or sticks to a surface. { 'ad'hēz-iv,tāp }

ad hoc inquiry [COMPUT SCI] A single request for a piece of information, such as a report. { 'ad'hāk in'kwī-rē }

adiabat [METEOROL] The relatively constant rate (5.5°F/100 feet or 10°C/kilometer) at which a mass of air cools as it rises. { 'ad-ē-ə,bat }

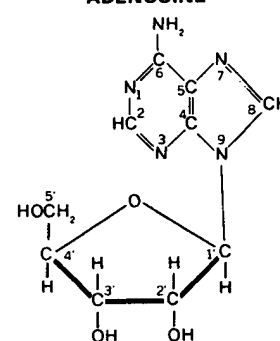
adiabatic [THERMO] Referring to any change in which there is no gain or loss of heat. { 'ad-ē-ə,bad-ik }

adiabatic approximation [ASTROPHYS] The approximation that the pressure and density of gas in a star are related by the adiabatic law. [PHYS CHEM] See Born-Oppenheimer approximation. { 'ad-ē-ə,bad-ik ə,prāk-sə'mā-shən }

adiabatic atmosphere [METEOROL] A model atmosphere characterized by a dry-adiabatic lapse rate throughout its vertical extent. { 'ad-ē-ə,bad-ik 'at-mə,sfir }

adiabatic calorimeter [PHYS CHEM] An instrument used to

ADENOSINE



Structural formula of adenosine.